Electronic Data Interchange with CALS (Transparent) Data

Electronic exchange of business and technical data promises great economies

Electronic Data Interchange (EDI) refers to the electronic interchange of business transactions using the ANSI ASC X12 standard. This standard consists of more than 200 "transaction sets," which allow computer-to-computer communication of formatted business information such as shipping documents, payment for products or services, requests for quotation, bids, and many other types of information. One of these transaction sets, "Specifications/Technical information," also referred to as 841, is capable of enclosing digital technical data, in binary or ASCII form.

Continuous Acquisition and Life-Cycle Support (CALS), in contrast to the X12 business data format standard, addresses technical data format standards, which are transmissible using X12 841. Employment of CALS and X12 for purchasing technically specified items, for example those defined by engineering drawings or computer-aided design databases, represents a potentially great savings of cost and time for all parties involved.

APPLICATIONS

- *Electronic interchange of business transactions using business and technical data format standards*
- *Electronic exchange of engineering data and drawings for concurrent engineering*
- *Electronic commerce through the interchange of business and technical data*

Together, CALS and EDI form a powerful union which can transform the ways companies do business today.

Concurrent Engineering

Using EDI with CALS data enables the exchange of engineering data and drawings that can be essential to an enterprise engaged in Concurrent Engineering. For example, a firm's engineering department may send a design electronically, using data in one or more CALS formats, to its manufacturing department for comment and collaboration.

Electronic commerce

Full Electronic Commerce can only be achieved through the interchange of both business and technical data. A significant percentage of today's procurements require the exchange of technical information, such as drawings or written specifications, which can be accomplished through EDI and CALS.

Virtual enterprise

Application of CALS together with EDI can enhance a purchaser/supplier relationship by providing an environment conducive to developing the agile "distributed factory" or "virtual enterprise" of tomorrow.

Requirements: Use of the ANSI ASC X12 and CALS standards for exchanging electronic data.

Availability: EDI with CALS is available now. LLNL has recently demonstrated interoperability of the CALS and EDI standards through the delivery of CALS raster images to small businesses using X12 841, X.400, and value-added networks. LLNL is also overseeing the implementation of an automated procurement system at McClellan Air Force Base to support all electronic procurement of technical items using X12 and CALS.

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